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**From:** Beck, Nancy [Beck.Nancy@epa.gov]  
**Sent:** 12/5/2017 8:18:21 PM  
**To:** Behl, Betsy [Behl.Betsy@epa.gov]  
**CC:** Dourson, Michael [dourson.michael@epa.gov]; Forsgren, Lee [Forsgren.Lee@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Strong, Jamie [Strong.Jamie@epa.gov]; Ohanian, Edward [Ohanian.Edward@epa.gov]; Grevatt, Peter [Grevatt.Peter@epa.gov]; Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]; Wambaugh, John [Wambaugh.John@epa.gov]; Sinks, Tom [Sinks.Tom@epa.gov]  
**Subject:** Re: last PFOA and PFOS document requested

Thank you Betsy.

Nancy B. Beck, Ph.D., DABT  
Deputy Assistant Administrator, OCSPP  
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[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)

On Dec 5, 2017, at 2:44 PM, Behl, Betsy <[Behl.Betsy@epa.gov](mailto:Behl.Betsy@epa.gov)> wrote:

Greetings, Please find attached the earlier (2005) PFOA draft risk assessment reviewed by the SAB. We are also attaching an article ORD identified, which was published in 2015 by Russell et al. (two authors from DuPont), that identifies a 2.4 year half-life for PFOA; the half-life we used to develop the HA was 2.3 years. There was some debate in our meeting on this topic. On Monday, Lawrence Martin (ORD) provided the other sets of comments from EPA that went to ATSDR.

We believe these are the last documents you identified. Thanks again for your interest.

Best, Betsy

From: Behl, Betsy  
Sent: Friday, December 01, 2017 6:09 PM  
To: Beck, Nancy <[Beck.Nancy@epa.gov](mailto:Beck.Nancy@epa.gov)<<mailto:Beck.Nancy@epa.gov>>>; Dourson, Michael <[dourson.michael@epa.gov](mailto:dourson.michael@epa.gov)<<mailto:dourson.michael@epa.gov>>>  
Cc: Forsgren, Lee <[Forsgren.Lee@epa.gov](mailto:Forsgren.Lee@epa.gov)<<mailto:Forsgren.Lee@epa.gov>>>; Nagle, Deborah <[Nagle.Deborah@epa.gov](mailto:Nagle.Deborah@epa.gov)<<mailto:Nagle.Deborah@epa.gov>>>; Strong, Jamie <[Strong.Jamie@epa.gov](mailto:Strong.Jamie@epa.gov)<<mailto:Strong.Jamie@epa.gov>>>; Ohanian, Edward <[Ohanian.Edward@epa.gov](mailto:Ohanian.Edward@epa.gov)<<mailto:Ohanian.Edward@epa.gov>>>; Grevatt, Peter <[Grevatt.Peter@epa.gov](mailto:Grevatt.Peter@epa.gov)<<mailto:Grevatt.Peter@epa.gov>>>; Bertrand, Charlotte <[Bertrand.Charlotte@epa.gov](mailto:Bertrand.Charlotte@epa.gov)<<mailto:Bertrand.Charlotte@epa.gov>>>; Wambaugh, John <[Wambaugh.John@epa.gov](mailto:Wambaugh.John@epa.gov)<<mailto:Wambaugh.John@epa.gov>>>; Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)<<mailto:Sinks.Tom@epa.gov>>>  
Subject: PFOA and PFOS documents requested

Thank you for the opportunity to describe to you the process we followed and the derivation of the drinking water health advisories for PFOA and PFOS published in 2016. Above are links to several documents you requested as well as a link below to the PFOA and PFOS health advisory documents and the PFOA and PFOS health effects support documents. The health advisory documents have a discussion of Immunotoxicity findings in the Effects Characterization sections

which may interest you, given ATSDR's emphasis.

1. Here is the link to the final documents and our response to peer review comments:  
<https://www.epa.gov/ground-water-and-drinking-water/supporting-documents-drinking-water-health-advisories-pfoa-and-pfos>

2. Attached are the 2014 drafts and peer review comments

3. Attached are OW's comments (see below) to ATSDR on the draft Tox Profile from June 2017

4. Attached is copy of PFOA critical study by Lau et al 2006

5. ATSDR draft (June 2017) critical studies/effects and MRL development for PFOA:

Neurodevelopmental effects/altered activity and skeletal alterations in mice offspring [Koskela et al. (2016); Onishchenko et al. (2011)]

Modeled average serum values using a peer-reviewed pharmacokinetic model developed by ORD (Wambaugh et al., 2013).

UF = 300 (LOAEL –10, animal-human – 3, human variability – 10)

Minimum Risk Level (MRL) =  $3 \times 10^{-6}$  mg/kg-day

We are providing the OW comments that were sent to ATSDR and will follow up early next week with the consolidated EPA comments that went to ATSDR in June, once we get them from ORD. I believe several offices made points similar to the OW comments. You also indicated an interest in the early studies done by OSCPP. We are trying to locate those as well and will send next week.

Please let me know if there is other information we discussed that you would like to review and we will do our best to provide it.

Best, Betsy  
Elizabeth (Betsy) Behl, Director  
Health and Ecological Criteria Division, 4304-T  
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<OPPT 2005 draft risk assess PFOA and salts.pdf>

<Russell-2015-PFOAHalfLife.pdf>